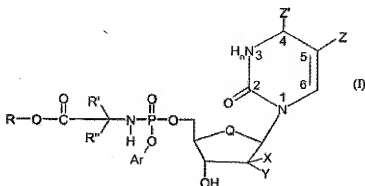


**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in this Application:

**Listing of Claims:**

1. (Currently amended) A chemical compound having formula I:



wherein:

R is selected from the group comprising alkyl, aryl and alkylaryl;

R' and R'' are independently selected from the group comprising H, alkyl and alkylaryl, or R' and R'' together form an alkylene chain so as to provide, together with the C atom to which they are attached, a cyclic system;

Q is selected from the group comprising -O- and -CH<sub>2</sub>-;

X and Y are independently selected from the group comprising H, F, Cl, Br, I, halogen, OH and methyl (-CH<sub>3</sub>);

Ar is a monocyclic aromatic ring moiety or a fused bicyclic aromatic ring moiety, either of which said ring moieties is carbocyclic or heterocyclic and is optionally substituted, any such substituent being selected from the group comprising halogen, halomethyl, oxo, hydroxy, carboxy, carboxyC<sub>1-6</sub> alkyl, alkoxy, alkoyl, alkoyloxy, aryloxy, aryloyl, aryloxyloxy, amino, C<sub>1-6</sub>alkylamino, diC<sub>1-6</sub>alkylamino, cyano, azide, nitro, thiol, C<sub>1-6</sub> alkylthiol, sulphonyl, sulfoxide, heterocyclic groups, alkyl groups and aryl groups;

Z is selected from the group comprising H, alkyl and halogen; and

n is 0 or 1,

wherein when n is 0, Z' is -NH<sub>2</sub> and a double bond exists between position 3 and position 4, and

when n is 1, Z' is = O;

or a pharmaceutically acceptable derivative ~~or metabolite~~ of a compound of formula I the derivative which upon administration to a recipient is capable of providing directly or indirectly a compound of formula I;

with the proviso that, except where R is 2-Bu-(CH<sub>2</sub>-CH(CH<sub>3</sub>)<sub>2</sub>) and one of R' and R" is H and one of R' and R" is methyl-(CH<sub>3</sub>), when n is 1 and X and Y are both H, then Ar is not unsubstituted phenyl-(C<sub>6</sub>H<sub>5</sub>).

2. (Original) A compound according to claim 1 wherein R is selected from the group comprising a C<sub>1-16</sub> primary or secondary alkyl group, a C<sub>5-7</sub> carbocyclic aryl group or a C<sub>1-6</sub>alkylC<sub>5-11</sub> aryl group.

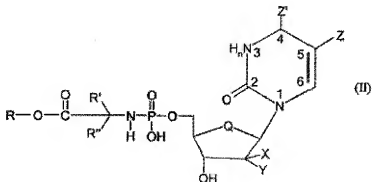
3. (Currently amended) A compound according to claim 2 wherein R is selected from the group comprising methyl-(CH<sub>3</sub>), ethyl-(C<sub>2</sub>H<sub>5</sub>) and benzyl-(CH<sub>2</sub>C<sub>6</sub>H<sub>5</sub>).

4. (Currently amended) A compound according to claim 3 wherein R is benzyl-CH<sub>2</sub>C<sub>6</sub>H<sub>5</sub>.

5. (Previously presented) A compound according to claim 1 wherein Ar is an optionally substituted C<sub>6</sub> monocyclic aromatic ring moiety.

6. (Original) A compound according to claim 5 wherein Ar is selected from the group comprising -C<sub>6</sub>H<sub>5</sub>, pCF<sub>3</sub>C<sub>6</sub>H<sub>4</sub>-, pFC<sub>6</sub>H<sub>4</sub>-, pNO<sub>2</sub>C<sub>6</sub>H<sub>4</sub>-, pClC<sub>6</sub>H<sub>4</sub>- and oClC<sub>6</sub>H<sub>4</sub>-.

7. (Currently amended) A chemical compound having formula II:



wherein n, Q, R, R', R'', X, Y, Z and Z'-Q is selected from the group comprising -O- and -CH<sub>2</sub>-,

R is selected from the group comprising alkyl, aryl and alkylaryl, and H,

R' and R'' are independently selected from the group comprising H, alkyl and alkylaryl, or R' and R'' together form an alkylene chain so as to provide, together with the C atom to which they are attached, a cyclic system,

X and Y are independently selected from the group comprising H, F, Cl, Br, halogen, OH and methyl(-CH<sub>3</sub>);

Z is selected from the group comprising H, alkyl and halogen; and

n is 0 or 1.

wherein when n is 0, Z' is NH<sub>2</sub> and a double bond exists between position 3 and position 4, and

when n is 1, Z' is = O;

with provisos that:

when n is 1, X and Y are both H, R is methyl(-CH<sub>3</sub>), one of R' and R'' is H and one of R' and R'' is methyl(-CH<sub>3</sub>), then Z is not -CH=CHBr;

when n is 1, X and Y are both H, R is methyl(-CH<sub>3</sub>), one of R' and R'' is H and one of R' and R'' is phenylethyl, phenylmethyl, indol-3-ylmethyl or indol-3-ylethyl, then Z is not F; and

when n is 0, X is not H.

8. (Previously presented) A compound according to claim 1 wherein R' and R'' are, independently, selected from the group comprising H, C<sub>1-6</sub> primary, secondary and tertiary alkyl, C<sub>1-3</sub>alkylC<sub>5-7</sub> aryl, or, when together they form an alkylene chain, they provide, together with the C atom to which they are attached, a C<sub>3-8</sub> carbocyclic aliphatic ring.

9. (Currently amended) A compound according to claim 8 wherein R' and R'' are, independently, selected from the group comprising H, methyl, benzyl and  $[-\text{CH}_2\text{CH}(\text{CH}_3)_2]$ , or, R' and R'' together with the C atom to which they are attached, provide a C<sub>3-6</sub> ring.

10. (Original) A compound according to claim 9 wherein R' and R'' are each methyl.

11. (Original) A compound according to claim 9 wherein one of R' and R'' is H and one of R' and R'' is methyl.

12. (Currently amended) A compound according to claim 9 wherein the carbocyclic ring is R' and R'', together with the C atom to which they are attached, provide a pentyl ring.

13. (Previously presented) A compound according to claim 1 wherein R' and R'' correspond to the side chains of a naturally occurring amino acid.

14. (Currently amended) A compound according to claim 1 wherein Z is selected from the group comprising H, C<sub>1-6</sub>alkyl, substituted C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkenyl, substituted C<sub>1-6</sub>alkenyl, C<sub>1-6</sub>alkynyl, and halogen, where any substituent present is selected from the group comprising halogen, halomethyl, oxo, hydroxyl, carboxy, carboxy C<sub>1-6</sub>alkyl, alkoxy, alkoyl, alkoyloxy, aryloxy, aryloyl, aryloxyoxy, amino, C<sub>1-6</sub>alkylamino, diC<sub>1-6</sub>alkylamino, cyano, azide, nitro, thiol, C<sub>1-6</sub>alkylthiol, sulphonyl, sulphoxide, heterocyclic groups, alkyl groups and aryl groups.

15. (Previously presented) A compound according to claim 1 wherein Q is O.

16. (Previously presented) A compound according to claim 1 wherein when n is 1, each of X and Y is H.

17. (Previously presented) A compound according to claim 1 wherein when n is 0, each of X and Y is F.

18. (Previously presented) A compound according to claim 1 wherein when n is 0, X is OH and Y is H.

19. (Previously presented) A compound according to claim 1 wherein when n is 0, X is H and Y is OH.

20. (Currently amended) A compound selected from the group comprising:

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[phenyl-(ethoxy-L-alaninyl)]-phosphate (CPF-3)

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[phenyl-(benzoxy-L-alaninyl)]-phosphate (CPF-2)

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-fluorophenyl-(methoxy-L-alaninyl)]-phosphate (CPF-5);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-fluorophenyl-(ethoxy-L-alaninyl)]-phosphate (CPF-6);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-fluorophenyl-(benzoxy-L-alaninyl)]-phosphate (CPF-7);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-nitrophenyl-(methoxy-L-alaninyl)]-phosphate (CPF-10);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-nitrophenyl-(ethoxy-L-alaninyl)]-phosphate (CPF-9);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-nitrophenyl-(benzoxy-L-alaninyl)]-phosphate (CPF-8);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[para-(trifluoromethyl)-phenyl-(methoxy-L-alaninyl)]-phosphate (CPF-15);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[para-(trifluoromethyl)-phenyl-(ethoxy-L-alaninyl)]-phosphate (CPF-25);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-trifluorophenyl-(benzoxy-L-alaninyl)]-phosphate (CPF-4);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[4-chlorophenyl-(methoxy-L-alaninyl)]-phosphate (CPF-13);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[4-chlorophenyl-(ethoxy-L-alaninyl)]-phosphate (CPF-14);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[4-chlorophenyl-(benzoxy-L-alaninyl)]-phosphate (CPF-12);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[phenyl-(methoxy- $\alpha,\alpha$ -dimethylglycinyl)]-phosphate (CPF-26)

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[phenyl-(ethoxy- $\alpha,\alpha$ -dimethylglycinyl)]-phosphate (CPF-27)

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[phenyl-(benzoxy- $\alpha,\alpha$ -dimethylglycinyl)]-phosphate (CPF-14)

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[4-nitrophenyl-(methoxy- $\alpha,\alpha$ -dimethylglycinyl)]-phosphate (CPF-45);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[4-nitrophenyl-(ethoxy- $\alpha,\alpha$ -dimethylglycinyl)]-phosphate (CPF-46);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[4-nitrophenyl-(benzoxy- $\alpha,\alpha$ -dimethylglycinyl)]-phosphate (CPF-47);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[4-chlorophenyl-(methoxy- $\alpha,\alpha$ -dimethylglycinyl)]-phosphate (CPF-42);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[4-chlorophenyl-(ethoxy- $\alpha,\alpha$ -dimethylglycinyl)]-phosphate (CPF-43);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[4-chlorophenyl-(benzoxy- $\alpha,\alpha$ -dimethylglycinyl)]-phosphate (CPF-44);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[para-(trifluoromethyl)-phenyl-(benzoxy- $\alpha,\alpha$ -dimethylglycinyl)]-phosphate (CPF-48);

(E)-5-(2-bromovinyl)-2'-deoxyuridine-5'-[phenyl-(methoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate  
(CPF-16)

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[phenyl-(ethoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate

(CPF-17)

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[phenyl-(benzoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate

(CPF-18)

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-nitrophenyl-(methoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate (CPF-19);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-nitrophenyl-(ethoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate (CPF-20);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-nitrophenyl-(benzoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate (CPF-21);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-fluorophenyl-(methoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate (CPF-22);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-fluorophenyl-(ethoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate (CPF-23);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-fluorophenyl-(benzoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate (CPF-24);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-chlorophenyl-(methoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate (CPF-32);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-chlorophenyl-(ethoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate (CPF-33);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[phenyl-(methoxy-L-phenylalaninyl)]-phosphate (CPF-36)

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-chlorophenyl-(benzoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate (CPF-34);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-trifluorophenyl-(methoxy- $\alpha,\alpha$ -cycloleucinyl)]-phosphate (CPF-28);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-trifluorophenyl-(ethoxy- $\alpha$ , $\alpha$ -cycloleucinyl)]-phosphate (CPF-29);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-trifluorophenyl-(benzoxy- $\alpha$ , $\alpha$ -cycloleucinyl)]-phosphate (CPF-30);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[phenyl-(methoxy-L-phenylalaninyl)]-phosphate (CPF-36)

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[phenyl-(methoxy-L-leucinyl)]-phosphate (CPF-35)

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[phenyl-(benzoxy-L-leucinyl)]-phosphate (CPF-37)

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-nitrophenyl-(benzoxy-L-leucinyl)]-phosphate (CPF-38);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[para-chlorophenyl-(benzoxy-L-leucinyl)]-phosphate (CPF-39);

(E)-5-(2-Bromovinyl)-2'-deoxyuridine-5'-[phenyl-(2-butyl-L-alaninyl)]-phosphate  
Gemcitabine-[phenyl-(benzoxy-L-alaninyl)]-phosphate (CPF-34);

Gemcitabine-[para-chlorophenyl-(benzoxy-L-alaninyl)]-phosphate (CPF-40) and

Gemcitabine-[para-chlorophenyl-(benzoxy- $\alpha$ , $\alpha$ -dimethylglycinyl)]-phosphate (CPF-41).

21. (Currently amended) A compound according to claim 1 for use in a method of treatment, preferably in the prophylaxis or the treatment of cancer, with the proviso that when n is 1, X and Y are both H, one of R' and R" is H and one of R' and R" is methyl ( $\text{CH}_3$ ), R is 2-Bu( $\text{CH}_2\text{-CH}(\text{CH}_3)_2$ ) or R is benzyl ( $\text{-CH}_2\text{C}_6\text{H}_5$ ), then Ar can be unsubstituted phenyl ( $\text{C}_6\text{H}_5$ ).

22. (Currently amended) Use of a compound according to claim 1 in the manufacture comprising the step of manufacturing of a medicament for the prophylaxis or treatment of cancer comprising the compound of claim 1, with the proviso that when n is 1, X and Y are both H, one of R' and R" is H and one of R' and R" is methyl ( $\text{CH}_3$ ), R is 2-Bu( $\text{CH}_2\text{-CH}(\text{CH}_3)_2$ ) or R is benzyl ( $\text{-CH}_2\text{C}_6\text{H}_5$ ), then Ar can be unsubstituted phenyl



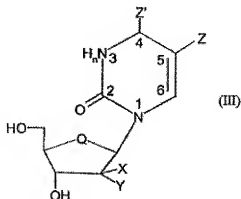
( $-C_6H_5$ ).

23. (Currently amended) A method of prophylaxis or for the treatment of cancer comprising administration to a patient in need of such treatment an effective dose of a compound according to claim 1 with the proviso that when  $n$  is 1,  $X$  and  $Y$  are both  $H$ , one of  $R'$  and  $R''$  is  $H$  and one of  $R'$  and  $R''$  is methyl ( $CH_3$ ),  $R$  is 2-Bu ( $CH_2CH(CH_3)_2$ ) or  $R$  is benzyl ( $-CH_2C_6H_5$ ), then  $Ar$  can be unsubstituted phenyl ( $-C_6H_5$ ).

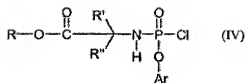
24. (Currently amended) A pharmaceutical composition comprising a compound according to claim 1 in combination with a pharmaceutically acceptable carrier, diluent or excipient.

25. (Previously presented) A method of preparing a pharmaceutical composition comprising the step of combining a compound according to claim 1 with a pharmaceutically acceptable excipient, carrier or diluent.

26. (Original) A process for the preparation of a compound of formula I according to claim 1, the process comprising reacting of a compound of formula (III):



with a compound of formula (IV)



wherein Ar, n, Q, R, R', R'', X, Y, Z' and Z'' have the meanings described in claim 1.

27. (Previously presented) A compound according to claim 7 wherein R' and R'' are, independently, selected from the group comprising H, C<sub>1-6</sub> primary, secondary and tertiary alkyl, C<sub>1-3</sub>alkylC<sub>5-7</sub> aryl, or, when together they form an alkylene chain, they provide, together with the C atom to which they are attached, a C<sub>3-8</sub> carbocyclic aliphatic ring.

28. (Currently amended) A compound according to claim 27 wherein R' and R'' are, independently, selected from the group comprising H, methyl, benzyl and  $[-\text{CH}_2\text{CH}(\text{CH}_3)_2]$ , or, R' and R'' together with the C atom to which they are attached, provide a C<sub>5-6</sub> ring.

29. (Previously presented) A compound according to claim 28 wherein R' and R'' are each methyl.

30. (Previously presented) A compound according to claim 28 wherein one of R' and R'' is H and one of R' and R'' is methyl.

31. (Currently amended) A compound according to claim 28 wherein the carbocyclic ring is R' and R'', together with the C atom to which they are attached provide a pentyl ring.

32. (Previously presented) A compound according to claim 7 wherein R' and R'' correspond to the side chains of a naturally occurring amino acid.

33. (Currently amended) A compound according to claim 7 wherein Z is selected from the group comprising H, C<sub>1-6</sub>alkyl, substituted C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkenyl, substituted C<sub>1-6</sub>alkenyl, C<sub>1-6</sub>alkynyl, and halogen where any substituent present is selected from the group comprising halogen, halomethyl, oxo, hydroxyl, carboxy, carboxyC<sub>1-6</sub>alkyl, alkoxy, alkoyl, alkoyloxy, aryloxy, aryloyl, aryloxyloxy, amino,

C<sub>1-6</sub>alkylamino, diC<sub>1-6</sub>alkylamino, cyano azide, nitro, thiol, C<sub>1-6</sub>alkylthiol, sulphonyl, sulphoxide, heterocyclic groups, alkyl groups and aryl groups.

34. (Previously presented) A compound according to claim 7 wherein Q is O.
35. (Previously presented) A compound according to claim 7 wherein when n is 1, each of X and Y is H.
36. (Previously presented) A compound according to claim 7 wherein when n is 0, each of X and Y is F.
37. (Previously presented) A compound according to claim 7 wherein when n is 0, X is OH and Y is H.
38. (Previously presented) A compound according to claim 7 wherein when n is 0, X is H and Y is OH.
39. (Previously presented) A pharmaceutical composition comprising a compound according to claim 7 in combination with a pharmaceutically acceptable carrier, diluent or excipient.
40. (Previously presented) A method of preparing a pharmaceutical composition comprising the step of combining a compound according to claim 7 with a pharmaceutically acceptable excipient, carrier or diluent.